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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,402	10/31/2003	Man Soo Han	51876P399	3288

8791 7590 03/28/2008

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EXAMINER	
PATEL, CHANDRAHAS B	
ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
03/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,402	HAN ET AL.	
	Examiner	Art Unit	
	Chandrahas Patel	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/25/2008 have been fully considered but they are not persuasive.

Applicant argues that Oki does not teach one of the sub-scheduler begins executing the contention process and a second one of the sub-scheduler finishes executing the contention process. However, examiner disagrees. Col. 5, lines 11-18 teaches operating several sub-schedulers in a pipelined manner. When operations are pipelined there are several stages that work on a process. Thus one of the stages begins the process and other stages continue working on the process until the process is finished. One could have parallel processing where each of the parallel processors can be pipelined.

Applicant argues that Oki does not teach producing contention result based on the request signal received at the start of the contention process. However, examiner disagrees. Oki teaches running the contention process at the start of the cell time slot waiting to dispatch from the queue.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Oki et al. (USPN 7,006,514).

Regarding claim 1, Oki teaches an input buffered switch using pipelined simple matching **[Fig. 1, 100]**, comprising: a plurality of input means **[Fig. 1, 110,]**, each having a

plurality of Virtual Output Queues (VOQs) for sending a request signal in every time slot when each VOQ has at least one cell **[Fig. 1, 115]**, for outputting the cell according to a grant signal transmitted to each VOQ **[Col. 5, lines 3-6, outputs when the request signal is 1]**; a scheduling means for executing a contention process according to the request signals from each VOQ of the plurality of input means **[Fig. 1, 120]**, sending contention results to the plurality of input means and sending switch operation information **[Col. 5, lines 39-50, sends the signal to VOQ to dispatch cells]**; and a switching means for outputting the cell received from the plurality of input means responsive to the switch operation information received from the scheduling means **[Fig. 1, 130]**, and wherein the scheduling means includes a plurality of sub-scheduling means for I) executing a contention process for a plurality of time slots according to the request signals from each VOQ of the plurality of the input means such that one of the sub-scheduler means begins executing the contention process and a second one of the sub-scheduler means finishes executing the contention process **[Col. 5, lines 11-18, arbitration process is the contention process, Request flag in shown at Fig. 2, 224]**, and II) producing contention results based on only the request signals received at initiation of the contention process **[Col. 7, lines 4-10, request signals are generated in parallel suggesting that only one request signal is necessary at the start of arbitration process]**, and wherein each VOQ sends a plurality of request signals for one cell to the plurality of sub-scheduling means **[Col. 8, lines 35-39, cells are being matched by subscheduler 1 and subscheduler 0 simultaneously]**, and wherein the scheduling means further includes a multiplexing means for multiplexing a contention result of each sub-scheduling means to the plurality of input means **[Col. 5, lines 62-67 – Col. 6, lines 1-3, multiplexes the contention result and uses it to schedule output from VOQs]**.

Regarding claims 3 and 9, Oki teaches sub-scheduling means gives priorities to each of the input means in case of the contention process to the same output **[Col. 7, lines 13-16]**.

Regarding claims 4 and 10, Oki teaches each sends the request signal at every time slot by sending the number of cells waiting in the VOQ to the scheduling means **[Col. 5, lines 39-50]**.

Regarding claim 5, Oki teaches a plurality of sub-scheduling means for executing the contention process for a plurality of time slots according to the request signals from each VOQ of the plurality of the input means such that one of the sub-scheduler means begins a contention process and another sub-scheduler finishes executing a contention process **[Col. 5, lines 11-18, arbitration process is the contention process, Request flag in shown at Fig. 2, 224]**; and a multiplexing means for multiplexing a contention result of each sub-scheduling means to the plurality of input means **[Col. 5, lines 62-67 – Col. 6, lines 1-3]**.

Regarding claims 6 and 11, Oki teaches sub-scheduling means gives a priority to the VOQ that has the largest number of awaiting cells in the VOQ in case of the contention process to the same output **[Col. 6, lines 46-48, by serving request counter scheduler gives priority to longest VOQ]**.

Regarding claims 7 and 12, Oki teaches each sub-scheduling means gives a priority to each VOQ in the contention process to the same output **[Col. 7, lines 13-16]** and gives a priority to a VOQ that has the largest number of awaiting cells in the VOQ when the VOQ having the priority does not send the request signal **[Col. 6, lines 46-52, reference teaches these management responsibilities can be run periodically and does not teach that VOQ is sending a signal having the priority]**.

Regarding claim 8, Oki teaches a contention method using pipelined simple matching in an input buffered switch **[Abstract]**, comprising the steps of: a) at each VOQ that has at least one awaiting cell, sending a request signal to a sub-scheduling means that begins a contention process at every time slot **[Col. 5, lines 11-18, arbitration process is the contention process]**; b) at the sub-scheduling means, executing a contention process for a plurality of time slots according to the request signals from each VOQ that has at least one awaiting cell **[Col. 5, lines 11-18, Request flag is shown in Fig. 2, 224]**; c) at the sub-scheduling means that finishes the contention process, sending a contention result to each input means at every time slot **[Col. 5, lines 62-67 – Col. 6, lines 1-3, multiplexes the contention result and uses it to schedule output from VOQs]**; and d) at the transfer-granted VOQ, transferring the cell to the switching means according to the contention result **[Fig. 1, 130]**, wherein the contention results are produced based on only the request signals received at initiation of the contention process in the sub-scheduling means **[Col. 7, lines 4-10, request signals are generated in parallel suggesting that only one request signal is necessary at the start of arbitration process]**, and wherein each VOQ sends a plurality of request signals of one cell to a plurality of the sub-scheduling means **[Col. 8, lines 35-39, cells are being matched by subscheduler 1 and subscheduler 0 simultaneously]**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chandrahas Patel whose telephone number is (571)270-1211. The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2616

/Chandrahas Patel/
Examiner, Art Unit 2616